

**REMARKS**

Claims 1-10 stand rejected under 35 USC 102(a) as being anticipated by Heilshov (U.S. Pat. 6,272,964.)

Applicant's inventive scroll saw blade positioner is attached to the lower surface of a table insert for limiting the longitudinal motion of the scroll saw blade. The scroll saw blade positioner comprises a stop block positioned to contact the non-cutting edge of the blade, limiting the longitudinal motion of the blade. As an advantageous result, cutting accuracy is improved. Furthermore, the blade life is extended because the scroll saw blade undergoes less flexing. The inventive blade guide has the further advantage that it is mechanically simple and inexpensive to manufacture.

The drawings are objected to under 37 CFR 1.83(a) because they did not show the "cylinder shaped stop block" of claims 2,5, and 8. Accordingly, the claims 2,5, and 8 are amended, deleting the cylinder shaped stop block to overcome the objection to the drawings.

Claim 1 is amended to more clearly distinguish it from the prior art. Specifically, the blade support structure "comprises a stop block having a front facing plane." Support for this limitation is found on page 6, in the paragraph beginning "Preferably, the stop block 32 is a prism or a cylinder..."

Reconsideration and allowance of the amended claims is requested for the following reasons.

**Heilshov's blocks 32 do not limit longitudinal blade flexing.**

In page 4 of the specification, in the paragraph beginning "FIG. 1 shows" clearly defines the longitudinal direction as the direction along which the workpiece is pressed into the blade. The longitudinal direction is also shown as direction *y* in FIG. 1. Accordingly, the claim language must be interpreted with these defined limitations in mind.

1  
2 Longitudinal blade motion is not affected by Heilshov's blocks 32. An inspection  
3 of their position in FIG. 5 of Heilshov (U.S. Pat. 6,272,964) shows that the blocks 32  
4 could limit lateral (i.e. direction  $x$ ) blade deflection but cannot limit the longitudinal blade  
5 motion. Limitation of lateral blade motion does not solve the problems (e.g. loss of  
6 cutting accuracy and blade breakage) that exist because of longitudinal blade flexing.

7  
8 **Heilshov's roller bearing 40 does not fulfill the limitations of the stop block of**  
9 **applicant's independent claims 1 and 8.**

10  
11 While Heilshov's roller bearing 40 does indeed limit the longitudinal blade  
12 motion it does not contain a front facing plane (because it is a rotating round bearing)  
13 positioned to make contact with the non-cutting edge of the blade. In Heilshov's blade  
14 guide, the roller bearing cannot contain a front facing plane (else it would not be round  
15 and would not rotate properly.) As a consequence, the distance between the top surface of  
16 the table and the point of contact between the non-cutting edge of the blade and the roller  
17 bearing 40 must be at least equal to the radius of the bearing 40. In applicant's invention,  
18 a stop block with a front facing plane (part 32 in FIGS. 4 and 5) allows for a very small  
19 (much smaller than Heilshov's) to zero distance between the top surface of the table and  
20 the point of contact between the non-cutting edge of the blade and applicant's stop block  
21 32.

22 Furthermore, Heilshov's roller bearing 40 is mechanically complex, rotating when  
23 the non-cutting edge of the blade comes into contact with it. Applicant's stop block is  
24 stationary when contacted by the non-cutting edge of the blade.

25  
26 **Heilshov's blade support structure is not attached to the lower surface of the table**  
27 **insert plate.**

28 As used in the specification, the term "lower" means the bottom or lowest surface  
29 (i.e. the opposite of the term "upper") of the table insert plate, as can be seen in FIG. 5 of

1 applicant's specification. Heilshov's blade support structure is not attached to the lower  
2 surface of plate, as can be seen in FIG. 6 of Heilshov.

3  
4 **Heilshov roller bearing cannot be flush with the surface of the work table**

5  
6 Claim 7 is amended to more clearly distinguish it from the prior art. Specifically,  
7 the top of the stop block is "flush with" the surface of the work table. Support for this  
8 limitation is found on page 7, in the paragraph beginning "FIGS. 6 and 7..." This  
9 limitation cannot be met by Heilshov's blade guide. If the roller bearing were positioned  
10 so that the top of the roller bearing were level with the table surface, the workpiece would  
11 come in contact with the roller bearing. This contact and the contact of the roller bearing  
12 with the non-cutting edge of the blade would try to rotate the roller bearing in opposite  
13 directions. As a result at least performance of the blade guide would be hindered, and a  
14 possible result is that the saw could be dangerous to operate (the workpiece could be  
15 pushed back toward the operator.)

16  
17 **Heilshov roller bearing rotates when contacted by the blade and does not meet the**  
18 **"does not rotate" limitation of claims 8-11**

19  
20 Claim 8 has been amended with the limitation "wherein the stop block does not  
21 rotate when contacted with the non-cutting edge of the blade." Heilshov's roller bearing  
22 40 is mechanically complex, rotating when the non-cutting edge of the blade comes into  
23 contact with it. Applicant's stop block is stationary when contacted by the non-cutting  
24 edge of the blade. As discussed in the Background section of applicant's specification,  
25 the Heilshov's roller bearing is not an appropriate solution for limiting the longitudinal  
26 flexing of the reciprocating blade of the scroll saw. Not only does the applicant's  
27 inventive scroll saw blade positioner more effectively limit longitudinal blade flexing  
28 (because of smaller distance between the workpiece and point of contact with the stop  
29 block), but it is also mechanically simpler and cheaper to manufacture.

1           New claim 11 is introduced by placing the same limitation as a dependent claim  
2   on claim 1.

3           Applicant submits that the amended claims are of patentable merit under Section  
4   103 because of the following reasons:

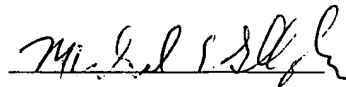
5       A. Applicant's inventive scroll saw blade positioner provides superior limitation of  
6       longitudinal blade flexing compared with the prior art by minimizing the distance  
7       between the surface of the work table and the point of contact between the non-  
8       cutting edge of the blade and the stop block. In fact, FIGS. 6 and 7 illustrate the  
9       embodiment where the distance is nil. This superior limitation of longitudinal  
10      blade flexing increases the cutting accuracy and extends blade life.

11      B. Applicant's scroll saw blade positioner is stationary (claims 8-11) when  
12      contacted by the non-cutting edge of the blade. When compared with prior art  
13      references, it had the advantages that it is mechanically simpler (less likely to  
14      break) and cheaper to manufacture.

**Conclusion**

For all of the above reasons, applicant submits that the claims are allowable over the prior art, and such allowance is respectfully requested.

Very Respectfully Submitted,



Michael E. Gallagher, applicant pro se

13651 Dorman Road

Waterford, PA 16441

Phone: (814) 796-6403

Email: [mike@onemanfactory.com](mailto:mike@onemanfactory.com)

**Certificate of Mailing:** I certify that this correspondence is being deposited with the U.S. Postal Service as first class mail on June 21, 2004 in an envelope addressed to:  
Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313.

Date 21 Jun 004

Inventor's Signature 